STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 131874

TO: Shailendra Kumar **Location: 5c03 / 5c18** **Thursday, September 09, 2004** **Art Unit: 1621** **Phone: 272-0640** **Serial Number: 10 / 627555**	**From: Jan Delaval** **Location: Biotech-Chem Library** **Rem 1A51** **Phone: 272-2504** **jan.delaval@uspto.gov**

Search Notes

sira
Search and Information Resources Administration

Scientific and Technical Information Center

Requester's Full Name: S. Kumar Examiner # : 69594 Date: 9/7/04
Art Unit: 1621 Phone Number 2-0640 Serial Number: 10/627,555
Mail Box and Bldg/Room Location: REM 5C03 5C18 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.
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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Crystalline beta 2 adrenergic receptor agonist
Inventors (please provide full names): Martin S. Linsell et al.

Earliest Priority Filing Date: 7/26/02

Attorney Docket No.: P-154-US1

9/9/04

WHAT IS CLAIMED IS:

1. Crystalline *N*-{2-[4-((*R*)-2-hydroxy-2-phenylethylamino)phenyl]ethyl}-(*R*)-2-hydroxy-2-(3-formamido-4-hydroxyphenyl)ethylamine dihydrochloride.

2. The compound of Claim 1 which is characterized by an x-ray powder diffraction pattern having two or more diffraction peaks at 2θ values selected from the group consisting of 15.61±0.2, 16.32±0.2, 19.50±0.2, 24.25±0.2, 24.92±0.2, 25.45±0.2, 28.67±0.2, and 31.16±0.2.

3. The compound of Claim 1 wherein the x-ray powder diffraction pattern comprises diffraction peaks at 2θ values of 24.25±0.2, 24.92±0.2, and 25.45±0.2.

4. The compound of Claim 1 which is characterized by an x-ray powder diffraction pattern in which the peak positions are substantially in accordance with the peak positions of the pattern shown in FIG. 1.

5. The compound of Claim 1 having an infrared absorption spectrum with significant absorption bands at 696±1, 752±1, 787±1, 827±1, 873±1, 970±1, 986±1, 1020±1, 1055±1, 1066±1, 1101±1, 1197±1, 1293±1, 1371±1, 1440±1, 1542±1, 1597±1, 1658±1, 2952±1, 3372±1, and 3555±1 cm^{-1}.

6. The compound of Claim 1 which is characterized by a differential scanning calorimetry trace which shows an onset of endothermic heat flow at about 200°C.

7. A hydrochloride salt of *N*-{2-[4-((*R*)-2-hydroxy-2-phenylethylamino)phenyl]ethyl}-(*R*)-2-hydroxy-2-(3-formamido-4-hydroxyphenyl)ethylamine having an x-ray powder diffraction pattern having two or more diffraction peaks at 2θ values selected from the group consisting of 15.61±0.2, 16.32±0.2, 19.50±0.2, 24.25±0.2, 24.92±0.2, 25.45±0.2, 28.67±0.2, and 31.16±0.2.

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=> fil reg
FILE 'REGISTRY' ENTERED AT 15:28:46 ON 09 SEP 2004
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:     8 SEP 2004  HIGHEST RN 741635-85-8
DICTIONARY FILE UPDATES:    8 SEP 2004  HIGHEST RN 741635-85-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que l21
L19             STR
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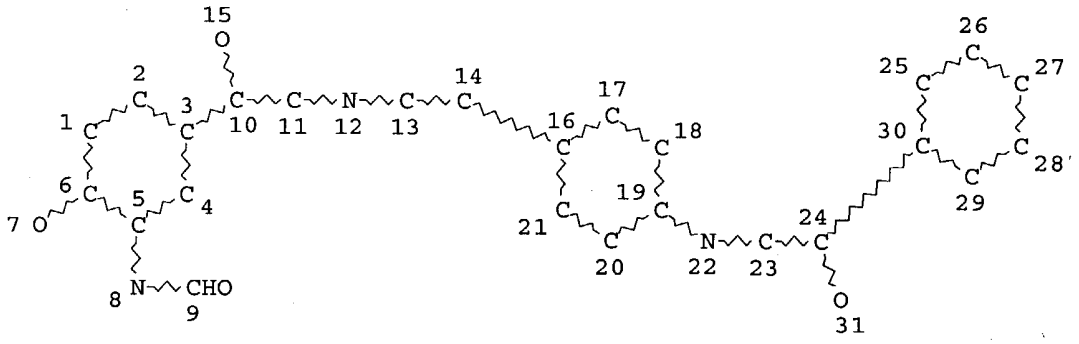

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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  31

STEREO ATTRIBUTES: NONE
L21           3 SEA FILE=REGISTRY FAM FUL L19

100.0% PROCESSED      9 ITERATIONS                          3 ANSWERS
SEARCH TIME: 00.00.01


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L1             1 S (WO2003-US23214 OR US2002-398678# OR US2002-398928#)/AP,RPN
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                E LINSELL M/AU
L2           18 S E4-E6
                E JACOBSEN J/AU
L3          106 S E3,E16
                E JACOBSEN JOHN/AU
L4           31 S E3,E9,E10
                E KHOSSRAVI D/AU
L5           10 S E4
                E PABORJI M/AU
L6            9 S E4
                E ZHANG W/AU
L7          863 S E3,E12
                E ZHANG WEI/AU
L8         2104 S E3
L9            7 S E35
                E ZHANG WEIJ/AU
L10          58 S E10,E11
                E THERAVANCE/PA,CS
L11          31 S E3-E12
                SEL RN L1

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L12          19 S E1-E19
L13           2 S L12 AND C25H29N3O4
L14           1 S 652990-07-3/CRN
                E C25H29N3O4/MF
L15         255 S E3 AND 46.150.18/RID AND 3/NR
L16           4 S L15 AND FORMAMIDE
L17           2 S L16 NOT ETHOXY
L18           0 S 344466-42-8/CRN
L19             STR
L20           0 S L19 FAM SAM
L21           3 S L19 FAM FUL
                SAV L21 KUMAR627/A
L22           3 S L13,L14,L17,L21

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L23           0 S L22

     FILE 'HCAPLUS' ENTERED AT 15:28:04 ON 09 SEP 2004
L24           2 S L22
L25           1 S L24 AND L1-L11
L26           2 S L24,L25

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L27           0 S L22

     FILE 'REGISTRY' ENTERED AT 15:28:46 ON 09 SEP 2004

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FILE 'HCAPLUS' ENTERED AT 15:28:54 ON 09 SEP 2004
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FILE COVERS 1907 - 9 Sep 2004 VOL 141 ISS 11
FILE LAST UPDATED: 8 Sep 2004 (20040908/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l26 all hitstr tot

L26 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:101120 HCAPLUS
DN 140:151985
ED Entered STN: 08 Feb 2004
TI Preparation and formulation of a crystalline β2 adrenergic receptor agonist, hydroxy(formamidohydroxyphenyl)ethylamine
IN **Linsell, Martin S.; Jacobsen, John R.; Khossravi, Davar; Paborji, Mehdi; Zhang, Weijiang**
PA **Theravance, Inc., USA**
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07C233-43
ICS A61K031-165; A61P011-00; C07C209-16
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 25
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004011416	A1	20040205	WO 2003-US23214	20030725 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-398678P	P	20020726	
US 2002-398928P	P	20020726	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004011416	ICM	C07C233-43
	ICS	A61K031-165; A61P011-00; C07C209-16

AB The invention provides formulations for the administration of a crystalline salt form of a novel β2 adrenergic receptor agonist. Methods of using the crystalline salt form to treat diseases associated with β2 adrenergic receptor activity, and processes useful for preparing such a crystalline compound are disclosed. Thus, an q. aerosol formulation contained a hydroxy(formamidohydroxyphenyl)ethylamine derivative 0.1755, citric acid 2.10, Tween-80 0.05, 1N NaOH qs to pH 5.0, and 0.9% NaCl solution qs to 1 g.
ST beta2 adrenergic receptor agonist crystal prepn; hydroxyformamidohydroxyphenylethylamine deriv adrenergic receptor agonist prepn
IT Drug delivery systems

(aerosols; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Polar solvents
(aprotic; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Drug delivery systems
(capsules; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Lung, disease
(chronic obstructive; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Drug delivery systems
(inhalants; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Medical goods
(inhalers; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Drug delivery systems
(injections; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Crystal structure
(of hydroxy(formamidohydroxyphenyl)ethylamine derivative)
IT Drug delivery systems
(oral; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Drug delivery systems
(powders, inhalants, dry; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Parturition
(premature; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Asthma
Buffers
Cholinergic antagonists
Heart, disease
Inflammation
Lung, disease
Nervous system, disease
Particle size distribution
Polar solvents
Powder x-ray diffractometry
Stability
Surfactants
(preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Corticosteroids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Drug delivery systems
(tablets; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Drug delivery systems
(topical; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT Adrenoceptor agonists
(β2-; preparation and formulations of crystalline β2 adrenergic receptor agonist)
IT 9036-21-9, PDE4
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(inhibitors; preparation and formulations of crystalline β2 adrenergic receptor agonist)

IT 67-63-0, Isopropanol, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)

IT **652990-07-3P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)

IT **652990-12-0P**
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)

IT 18162-48-6, tert.-Butyldimethylsilyl chloride 201677-59-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)

IT 321709-19-7P 652990-08-4P 652990-09-5P 652990-10-8P 652990-11-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)

IT 77-92-9, Citric acid, biological studies 112-80-1, Oleic acid, biological studies 7647-14-5, Sodium chloride, biological studies 9005-65-6, Tween 80 9005-67-8, Tween 60 26266-58-0, Sorbitan trioleate 192056-77-2 397864-44-7
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Advanced Medicine Inc; WO 0142193 A 2001 HCAPLUS

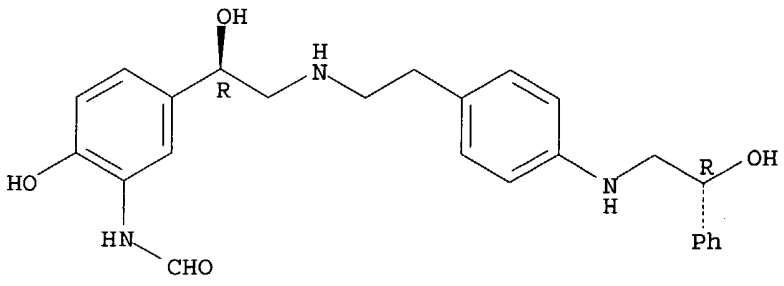
(2) Malamas, M; MEDICINAL CHEMISTRY RESEARCH 2000, V10(3), P164 HCAPLUS

IT **652990-07-3P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)

RN 652990-07-3 HCAPLUS

CN Formamide, N-[2-hydroxy-5-[(1R)-1-hydroxy-2-[[2-[4-[[(2R)-2-hydroxy-2-phenylethyl]amino]phenyl]ethyl]amino]ethyl]phenyl]- (9CI) (CA INDEX NAME)

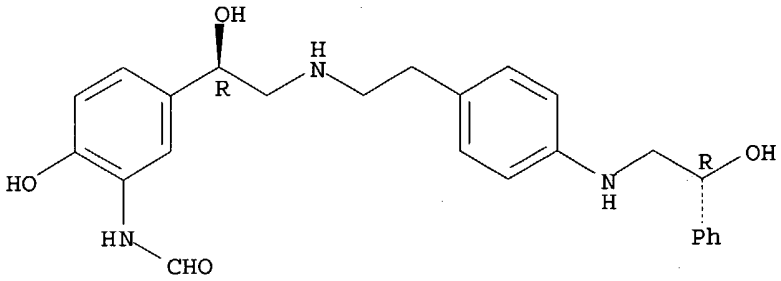
Absolute stereochemistry.



IT **652990-12-0P**

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and formulations of crystalline β2 adrenergic receptor agonist)
RN 652990-12-0 HCAPLUS
CN Formamide, N-[2-hydroxy-5-[(1R)-1-hydroxy-2-[[2-[4-[[(2R)-2-hydroxy-2-phenylethyl]amino]phenyl]ethyl]amino]ethyl]phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



●2 HCl

L26 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:435027 HCAPLUS
DN 135:45979
ED Entered STN: 15 Jun 2001
TI Preparation of 4-(arylhydroxyethylaminoethyl)phenylaminohydroxyethylbenzenes and related compounds as β2 adrenergic receptor agonists and partial agonists.
IN Moran, Edmund J.; Griffin, John H.; Choi, Seok-ki
PA Advanced Medicine, Inc., USA
SO PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07C233-43
ICS C07C215-68; A61K031-135; A61K031-165; A61P011-00; A61P025-00
CC 25-7 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 1, 27
FAN.CNT 31

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001042193	A1	20010614	WO 2000-US33057	20001206
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6576793	B1	20030610	US 2000-637899	20000814
ZA 2000005850	A	20020517	ZA 2000-5850	20001019
BR 2000015962	A	20020730	BR 2000-15962	20001206
EP 1235787	A1	20020904	EP 2000-986271	20001206
EP 1235787	B1	20031029		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

	JP 2003516381	T2	20030513	JP 2001-543495	20001206
	AT 253039	E	20031115	AT 2000-986271	20001206
	PT 1235787	T	20040331	PT 2000-986271	20001206
	US 2003087307	A1	20030508	US 2002-108945	20020328
	ZA 2002003450	A	20030513	ZA 2002-3450	20020430
	NO 2002002655	A	20020605	NO 2002-2655	20020605
	HK 1048803	A1	20040130	HK 2003-101047	20030213
PRAI	US 1999-457618	A	19991208		
	US 2000-637899	A1	20000814		
	US 1999-323943	A2	19990602		
	WO 2000-US33057	W	20001206		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001042193	ICM	C07C233-43
	ICS	C07C215-68; A61K031-135; A61K031-165; A61P011-00; A61P025-00
US 2003087307	ECLA	A61K031/137; A61K031/167; C07C215/60; C07C215/68; C07C233/43

AB LpXq [p= 2-10; q = 1-20; X = linker, L = ligand; 1 ligand = Ar1CH(OH)CHR1NR2WAr2, the other = QAr3; Ar1, Ar2 = aryl, heteroaryl, heterocyclyl, (substituted) cycloalkyl; R1 = H, (substituted) alkyl, bond to linker; R2 = H, aralkyl, acyl, (substituted) alkyl, cycloalkyl, bond to linker; W = bond, (substituted) (heteroatom-interrupted) alkylene; Ar3 = aryl, heteroaryl, (substituted) cycloalkyl, heterocyclyl; Q = bond, (substituted) (heteroatom-interrupted) alkylene; with provisos], were prepared for treatment of respiratory diseases (no data). Thus, α,α-hydroxy-4-hydroxy-3-methoxycarbonylacetophenone (preparation given) was stirred with trans-1,4-diaminocyclohexane in THF for 3 h at room temperature followed by addition of BH3/Me2S in hexane and stirring for 4 h to give trans-1,4-bis[N-[2-(4-hydroxy-3-hydroxymethylphenyl)-2-hydroxyethyl]amino]cyclohexane.

ST arylhydroxyethylaminoethylphenylaminohydroxyethylbenzene prepn adrenergic agonist; chronic obstructive pulmonary disease treatment arylhydroxyethylaminoethylphenylaminohydroxyethylbenzene prepn; antiasthmatic arylhydroxyethylaminoethylphenylaminohydroxyethylbenzene prepn

IT Lung, disease
(chronic obstructive, treatment; preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β2 adrenergic receptor agonists and partial agonists)

IT Antiasthmatics
(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β2 adrenergic receptor agonists and partial agonists)

IT Adrenoceptor agonists
(β2-; preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β2 adrenergic receptor agonists and partial agonists)

IT 321708-20-7P 321708-23-0P 321708-25-2P 321708-27-4P 321708-29-6P
321708-31-0P 321708-33-2P 321708-35-4P 321708-37-6P 321708-39-8P
321708-41-2P 321708-43-4P 321708-45-6P 321708-47-8P 321708-49-0P
321708-51-4P 321708-53-6P 321708-56-9P 321708-57-0P 321708-60-5P
321709-02-8P 344466-40-6P 344466-41-7P **344466-42-8P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β2 adrenergic receptor agonists and partial agonists)

IT 70-11-1, α-Bromoacetophenone 80-52-4 100-52-7, Benzaldehyde, reactions 101-80-4 101-90-6, Resorcinol diglycidyl ether 107-22-2, Glyoxal 539-48-0, p-Xylylenediamine 629-09-4, 1,6-Diiodohexane 1074-12-0, Phenylglyoxal 1075-06-5, α,α-Dihydroxyacetophenone 1477-55-0, 1,3-Benzenedimethanamine 1572-55-0, 4-Aminomethyl-1,8-octanediamine 1761-71-3 2461-42-9 2579-20-6, 1,3-Cyclohexanedimethanamine 2615-25-0, trans-1,4-Diaminocyclohexane 4403-69-4, 2-Aminobenzylamine 4403-71-8, 4-Aminobenzylamine 6621-59-6, 6-Bromohexanenitrile 7209-38-3, 1,4-Piperazinedipropanamine 10210-17-0, 3-(4-Hydroxyphenyl)-1-propanol 13472-00-9, 2-(4-Aminophenyl)ethylamine 16475-90-4, Methyl 5-acetylsalicylate 20780-53-4 37148-47-3 43229-01-2 94749-70-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β2 adrenergic receptor agonists and partial agonists)

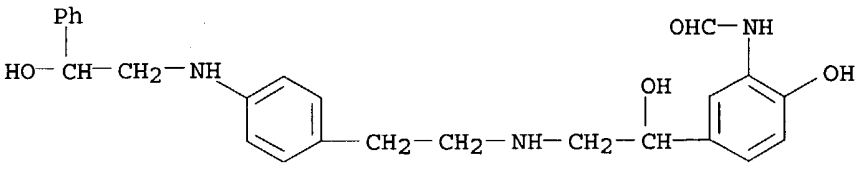
IT 27475-09-8P 27475-14-5P 29754-58-3P 92900-77-1P 94838-59-2P 321708-64-9P 321708-67-2P 321708-69-4P 321708-72-9P 321708-74-1P 321708-76-3P 321708-78-5P 321708-82-1P 321708-84-3P 321708-86-5P 321708-89-8P 321708-90-1P 321708-92-3P 321708-94-5P 321708-98-9P 321709-00-6P 344466-43-9P 344466-44-0P 344466-45-1P 344466-46-2P 344466-47-3P 344466-48-4P 344466-49-5P 344466-50-8P 344466-51-9P 344466-52-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β2 adrenergic receptor agonists and partial agonists)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Advanced Medicine Inc; WO 9964035 A 1999 HCAPLUS
(2) Anon; PATENT ABSTRACTS OF JAPAN 1998, V1998(11)
(3) Degussa; GB 1040724 A 1966
(4) Kissei Pharmaceut Co Ltd; JP 10152460 A 1998 HCAPLUS
(5) Sepracor Inc; WO 9821175 A 1998 HCAPLUS
(6) Thomae Gmbh Dr K; GB 1394542 A 1975 HCAPLUS

IT **344466-42-8P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β2 adrenergic receptor agonists and partial agonists)

RN 344466-42-8 HCAPLUS
CN Formamide, N-[2-hydroxy-5-[1-hydroxy-2-[[2-[4-[(2-hydroxy-2-phenylethyl)amino]phenyl]ethyl]amino]ethyl]phenyl]- (9CI) (CA INDEX NAME)



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